Claims

1   1.   A method of facilitating a search by a user for a product from among a plurality of products,

2   the products being defined by a set of measurable attributes, each product having a value for each

3   attribute, the method comprising the steps of:

4   a. facilitating user selection of one or more products;

5   b. combining the attribute values of the selected one or more products to produce a set of

6   progeny attribute values;

7   c. selecting, from among the plurality of products, at least one candidate product based on

8   the progeny attribute values; and

9   d. presenting the at least one candidate product to the user.

10   2.   The method of claim 1 wherein steps (a)-(d) are repeated until a final optimal product is

12   selected.

11   3.   The method of claim 1, further comprising, before step (a), the steps of:

12   (i) selecting an initial subset of the plurality of products; and

13   (ii) presenting the initial subset to the user.

14   4.   The method of claim 3 wherein the selecting step (i) comprises selecting randomly an initial

12   subset of the plurality of products.

1   5.   The method of claim 3 wherein the selecting step (i) comprises using a predetermined initial

2   subset that is a well distributed sample of the plurality of products.

1   6.   The method of claim 1 wherein step (a) comprises facilitating user selection of at least one

2   desired products and at least one product that is not desired.

1   7.   The method of claim 6 wherein the selecting step (c) comprises selecting products having

2   attributes similar to the at least one desired product and unlike the at least one product that is not

3   desired.

1   8.   The method of claim 1 further comprising, before step (b), the steps of:

2   (i).   displaying the attribute values of at least one product; and

3   (ii).   allowing the user to modify the displayed attributes values.

1 9.　　The method of claim 8 wherein step (b) comprises combining the attribute values of the

2 selected products and the modified displayed attribute to produce a set of progeny attribute values.

1 10.　　The method of claim 1 wherein step (a) comprises facilitating user selection of one or more

2 products from a random subset of the plurality of products.

1 11.　　The method of claim 1, wherein step (c) further comprises selecting at least one candidate

2 product based on proximity of candidate product attribute values to progeny attribute values.

1 12.　　The method of claim 1, further comprising the step of identifying the attributes that are

2 important to a user by observing at least one user selection;

3 　　and wherein step (c) comprises selecting at least one candidate product based on the

4 progeny attribute values and the attributes that are important to the user.

1 13.　　The method of claim 12, wherein the at least one user selection comprises at least one

2 current selection and at least one past selection.

1 14.　　The method of claim 1, wherein the combining step (b) comprises using a random

2 probability function.

1 15.　　The method of claim 1, wherein the combining step (b) comprises, for each measurable

2 attribute:

3 　　choosing one of the selected products;

4 　　taking the attribute value of the chosen one of the selected products as the progeny attribute

5 value for that measurable attribute.

1 16.　　The method of claim 1, wherein the combining step (b) comprises choosing one of the

2 selected products and, for a subset of the measurable attributes:

3 　　taking the attribute value of the chosen one of the selected products as the progeny attribute

4 value for that measurable attribute.

1 17.　　The method of claim 16 wherein the subset of the measurable attributes comprises all of the

2 measurable attributes.

1 18.　　The method of claim 16 wherein the choosing step comprises randomly choosing one of the

2 selected products.

1   19.   The method of claim 1, wherein the combining step (b) comprises, for each measurable

2   attribute:

3   associating a fraction value with each of the selected products such that the fraction values

4   total 1;

5   multiplying the attribute value of each of the selected products by the fraction value

6   associated with that product; and

7   taking the sum of the results of the multiplying step as the progeny attribute value for that

8   measurable attribute.

1   20.   The method of claim 1, wherein the combining step (b) comprises associating a fraction

2   value with each of the selected products such that the fraction values total 1, and, for each of a

3   subset of measurable attributes:

4   multiplying the attribute value of each of the selected products by the fraction value

5   associated with that product; and

6   taking the sum of the results of the multiplying step as the progeny attribute value for that

7   measurable attribute.

1   21.   The method of claim 20 wherein the subset of measurable attributes comprises all of the

2   measurable attributes.

1   22.   The method of claim 20 wherein the associating step comprises associating at least one

2   random fraction value with one of the selected products.

1   23.   The method of claim 1 wherein:

2   the facilitating step (a) is performed by a server computer in communication with a client

3   computer over a computer network, the user interacting with the client computer to select the

4   products; and

5   step (d) comprises presenting the at least one candidate product to the user by transmitting

6   information describing the at least one candidate product from the server computer over the

7   computer network to the client computer for presentation thereon.

1   24.   The method of claim 23 wherein the server computer comprises a web server, the client

2   computer comprises a web browser, and the computer network comprises the Internet.

1   25.   The method of claim 1 wherein the facilitating step (a) and the presenting step (d) is

2   performed by a single computer.

1   26.   The method of claim 25 wherein the single computer is a kiosk in a retail location.

1   27.   A system for facilitating a search for a product from among a plurality of products, the

2   products being defined by a set of measurable attributes, each product having a value for each

3   attribute, the system comprising:

4   a. a user interface for facilitating user selection of at least one products;

5   b. a combination subsystem for combining the attribute values of the selected at least one

6   products to produce a set of progeny attribute values;

7   c. a selection subsystem for selecting, from among the plurality of products, at least one

8   candidate product based on the progeny attribute values; and

9   d. a result output for communicating the at least one candidate product to the user.

1   28.   The system of claim 27 wherein the system iterates operation of the user interface,

2   combination subsystem, selection subsystem and the result output until a final optimal product is

3   selected.

1   29.   The system of claim 27 wherein the user interface is for facilitating user selection of at least

2   one desired product and at least one product that is not desired.

1   30.   The system of claim 27 wherein the user interface is also for displaying the attribute values

2   of at least one product; and allowing the user to modify the displayed attributes values.

1   31.   The system of claim 30 wherein the combination subsystem is for combining the attribute

2   values of the selected products and the modified displayed attribute to produce a set of progeny

3   attribute values.

1   32.   The system of claim 27 wherein the user interface is for facilitating user selection of at least

2   one product from a random subset of the plurality of products.

1   33.   The system of claim 27, wherein the selection subsystem is for selecting at least one

2   candidate product based on proximity of candidate product attribute values to progeny attribute

3   values.

1   34.   The system of claim 27, further comprising an observation subsystem for identifying the

2   attributes that are important to a user by observing user selection and wherein the selection

3   subsystem selects at least one candidate product based on the progeny attribute values and the

4   attributes that are important to the user.

1   35.   The system of claim 27, wherein the combination subsystem comprises a random probability

2   function.

1   36.   The system of claim 27, wherein the combination subsystem comprises, for each measurable

2   attribute:

3   choosing one of the selected products;

4   taking the attribute value of the chosen one of the selected products as the progeny attribute

5   value for that measurable attribute.

1   37.   The system of claim 27, wherein the combination subsystem chooses one of the selected

2   products and, for a subset of the measurable attributes takes the attribute value of the chosen one of

3   the selected products as the progeny attribute value for that measurable attribute.

1   38.   The system of claim 37 wherein the subset of the measurable attributes comprises all of the

2   measurable attributes.

1   39.   The system of claim 37 wherein the selection subsystem randomly chooses one of the

2   selected products.

1   40.   The system of claim 27, wherein the combination subsystem, for each measurable attribute,

2   associates a fraction value with each of the selected products such that the fraction values total 1,

3   multiplies the attribute value of each of the selected products by the fraction value associated with

4   that product, and takes the sum of the results of the multiplying step as the progeny attribute value

5   for that measurable attribute.

1   41.   The system of claim 27, wherein the combination subsystem associates a fraction value with

2   each of the selected products such that the fraction values total 1; and, for each of a subset of

3   measurable attributes, multiplies the attribute value of each of the selected products by the fraction

4   value associated with that product, and takes the sum of the results of the multiplying step as the

5   progeny attribute value for that measurable attribute.

1   42.   The system of claim 41 wherein the subset of measurable attributes comprises all of the

2   measurable attributes.

1   43.   The system of claim 41 wherein the combination subsystem associates at least one random

2   fraction value with one of the selected products.

1   44.   The system of claim 27 wherein the system is implemented in a server computer configured

2   for communication over a computer network with a client computer, the user interface and result

3   output being implemented as display instructions originating with the server but communicated to

4   and displayable on the client computer.

1   45.   The system of claim 44 wherein the server computer comprises a web server for generating

2   the display instructions, the instructions being communicated to the client computer via the Internet

3   and displayable on a web browser running on the client computer.

46.   The system of claim 27 wherein the system is implemented as a single computer comprising

the user interface, combination subsystem, selection subsystem and the result output.

47.   The system of claim 46 wherein the single computer comprises a kiosk in a retail location.